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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/734,682	12/12/2003	William Bedingham	59072US002	1223
32692 7590 02/21/2008 3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427				
EXAMINER NAGPAUL, JYOTI				
ART UNIT 1797		PAPER NUMBER		
NOTIFICATION DATE 02/21/2008		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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LegalDocketing@mmm.com

Office Action Summary**Application No.**

10/734,682

Applicant(s)

BEDINGHAM ET AL.

Examiner

JYOTI NAGPAUL

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Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 30-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 30-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S508)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Amendment filed on December 5, 2007 has been acknowledged. Claims 1-10 and 30-38 are pending.

Response to Amendment

Objection of drawings under 37 CFR 1.83(a) has been modified in light of applicants' amendments.

Rejection of Claims 1-7 and 9 as being anticipated by Anderson (US 3873217) has been modified in light of applicants' amendments.

Rejection of Claim 8 as being unpatentable over Anderson in view of Kellogg (US 6302134) has been modified in light of applicants' amendments.

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "the process chamber is located between a first major side and a second major side of the sample processing device, wherein at least a portion of the mixing chamber is located between the process chamber and the second major side of the sample processing device" as recited in claims 6 and 35 and "wherein substantially all the mixing chamber is located between the process chamber and the second major side of the sample processing device" as recited in claims 7 and 36 must be shown or the feature(s) canceled from the claim(s). Applicants' have submitted replacement drawings on December 5, 2007 to show the major sides. However, Figures 7 and 8 do not show clearly a portion of the mixing chamber is located between the process chamber and the second major side of

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the sample processing device. Figure 7 illustrates two mixing chambers (260a and 260b) with a vague illustration of the process chamber (240). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. **Claims 1-10 and 30-38** are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Kellogg.

Anderson teaches a sample mixing apparatus. The apparatus comprises a process chamber (3) comprising a delivery port (9) on a proximal side of the process chamber (3) and an exit port (not labeled see figure 1) on a distal side of the process chamber (3). The apparatus further comprises a mixing chamber (2) comprising a mixing port (12), wherein the mixing port (12) is located on the distal side of the process chamber (3). The rotation of the sample processing device as described in Anderson

moves at least a portion of sample material in the processing chamber into the mixing chamber (2) when the mixing port is open. It appears in Figure 1, the proximal side of the process chamber (3) is located closer to the axis of rotation than the distal side of the process chamber (3). In Anderson, when the exit port (not labeled see figure 1) of the process chamber is open, rotation of the sample processing device about the axis of rotation moves the sample material out of the process chamber. (See Col. 2, Lines 40-48) Additionally Examiner notes, the above limitations are functional and are of no patentable significance in apparatus claims. The device of Anderson meets all the claimed structural elements and thus is capable of performing the functional limitations. As shown in Figure 1, a radial axis extends through the proximal side and the distal side of the process chamber (3). As shown in Figure 1, the radial axis intersects the axis of rotation, and wherein the radial axis extends through the delivery port (9) and the exit port (not labeled see figure 1) of the process chamber (3). Further, at least a portion of the mixing chamber (2) is located in a tangential direction off to a side of the process chamber (3) relative to the radial axis. (See Figure 1) It appears in Figure 1, the process chamber (1) is located between a first major side (not labeled see figure 1) and a second major side (not labeled see figure 1) of the sample processing device. Additionally, at least a portion of mixing chamber (2) is located between the process chamber (3) and the second major side (not labeled see figure 1).

Anderson fails to teach wherein the mixing port comprises a valve.

Kellogg teaches microfluidic structure on a platform that uses centrifugal rotors for the movement of fluid. The microfluidic structure comprises a sacrificial valve (314) that

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is placed at the junction of a channel (305) that releases to permit fluid flow through a channel. (See Col 16, Lines 40-55)

It would have been obvious to one having ordinary skill in the art to provide a valve to the mixing port in the system of Anderson to achieve the predictable results of preventing premature mixing and control fluid flow through the device

Response to Arguments

6. Applicant's arguments with respect to claims 1-10 and 30-38 have been considered but are moot in view of the new ground(s) of rejection. Refer above.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JYOTI NAGPAUL whose telephone number is (571)272-1273. The examiner can normally be reached on Monday thru Friday (10:00-7:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JN

/Jill A. Warden/
Supervisory Patent Examiner, Art Unit 1797